



Helping You Live Healthier Every Day

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OFFICE OF PUBLIC HEALTH • Center for Health Policy, Information, & Promotion

Bioterrorism for Medical Professionals

FAQ's - Medical Facts About Brucellosis

Clinical Features Extremely variable. In the acute form (<8 weeks from illness onset), symptomatic, nonspecific and “flu-like,” including fever, sweats, malaise, anorexia, headache, myalgia, and back pain. In the undulant form (<1 year from illness onset), symptoms include undulant fevers, arthritis, and orchiepididymitis in males. Neurologic symptoms may occur acutely in up to 5% of cases. In the chronic form (>1 year from onset), symptoms may include chronic fatigue syndrome-like, depressive episodes, and arthritis.

Etiologic Agent Brucella species, usually *B. abortus* (cattle), *B. melitensis*, *B. ovis* (sheep, and goats), *B. suis* (pigs), and rarely *B. canis* (dogs).

Incidence In the United States, < 0.5 cases per 100,000 population. Most cases are reported from California, Florida, Texas, and Virginia.

Sequelae Extremely variable, including granulomatous hepatitis, peripheral arthritis, spondylitis, anemia, leukopenia, thrombocytopenia, meningitis, uveitis, optic neuritis, papilledema, and endocarditis.

Transmission Zoonotic. Commonly transmitted through abrasions of the skin from handling infected mammals. In the United States, occurs more frequently by ingesting contaminated milk and dairy products. Highly infectious in the laboratory via aerosolization; cultures are considered to warrant biosafety level-3 precautions.

Risk Groups Abattoir workers, meat inspectors, animal handlers, veterinarians, and laboratorians.

Surveillance Brucellosis is a nationally notifiable disease and reportable to the local health authority.

Trends For previous 10 years, approximately 100 cases per year have been reported.

Challenges

Elimination of domestic and feral animal reservoirs. Develop a serologic test to detect infection by a recently introduced new live *B. abortus* vaccine (RB-51).

Opportunities

Identify, transfer to CDC laboratories, test, and improve as needed, rapid diagnostic technologies developed for identification of *Brucella* spp. for bioterrorism preparedness.

Links

Technical Information about Brucellosis

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/brucellosis_t.htm

Level A Laboratory Procedures for Identification of *Brucella* Species

http://www.bt.cdc.gov/Agent/Brucellosis/bsp_cla_cp_121201.pdf

Packaging Protocols for Biological Agents/Diseases

<http://www.bt.cdc.gov/labissues/PackagingInfo.pdf>

Presumptive *Brucella* spp. Identification and Similar Organisms

<http://www.bt.cdc.gov/documents/PPTResponse/table5brucellaid.pdf>

Agents of Bioterrorism

Slide set. Describes specific tests Level A microbiology laboratories should perform to rule out a suspected organism or refer it to another laboratory.

Part 1

<http://www.bt.cdc.gov/documents/PPTResponse/btsrript1edits.pdf>

See Brucellosis, slides 48-53 PowerPoint (788 KB/53 slides)

Part 2

<http://www.bt.cdc.gov/documents/PPTResponse/btsrript2-inserts.pdf>

See Brucellosis, slides 1-15 PowerPoint (788 KB/62 slides)



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